Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-9. (Cancelled)

10. (previously presented) The spacer grid (10) according to claim 15, wherein the vertical support part (51) is bent at two steps along substantially horizontal bending lines, and the fuel rod support part (52) is equiangular with the fuel rods (125), whereby a uniform contact pressure distribution is provided between the fuel rod support part (52) in contact with the fuel rods (125).

11. (Cancelled)

12. (Cancelled)

13. (Currently amended) The spacer grid (10) according to claim 15 ~~11~~, wherein each of the coolant flow guide vanes (57) is bent toward a center of the spacer grid (10), with a width of each of the guide vanes (57) reducing from a position at which each of the guide vanes (57) is initially bent, each of the guide vanes (57) has a tapered shape, with a peak of each of the guide vanes (57) being rounded.

14. (Currently amended) The spacer grid (10) according to claim 15 ~~11~~, wherein each of the guide taps (58) is bent toward the center of the spacer grid (10), and is rounded at a bent tip

thereof to form an arc-shaped edge.

15. (currently amended) A spacer grid (10) for placing and supporting a plurality of longitudinal fuel rods (125) in a nuclear reactor fuel assembly, comprising:

a plurality of inner strips (30) intersecting each other to form a plurality of guide tube cells (15) to receive guide tubes (13) therein and a plurality of fuel rod cells (26) to receive the fuel rods (125) therein, with a plurality of mixing blades (27) projecting upward from the inner strips (30) at intersections of the inner strips (30); and

a plurality of perimeter strips (40) each of which comprises a plurality of unit strips including intermediate unit strips (40') and corner unit strips (40"), the perimeter strips (40) encircling the intersecting inner strips (30), and the corner unit strips(40") forming outermost corner cells of the spacer grid (10), with a grid spring (50) provided on each of the unit strips (40', 40"), the grid spring (50) comprising:

a vertical opening (53) formed at a central area of each of the unit strips;

a vertical support part (51) extending vertically in the vertical opening (53) from central portions of top and bottom edges of the vertical opening (53); and

a fuel rod support part (52) provided at a central portion of the vertical support part (51), the fuel rod support part (52) being bent to have equiangular surface contact with a fuel rod supported by the grid spring <u>for reducing fretting corrosion of the fuel rod</u>,

further comprising inner grid springs on the inner strips, wherein the inner grid springs comprise an opening formed in the inner strips and defined by top, bottom and side edges, two spaced inner support parts extending vertically in the opening

between the top and bottom edges of the opening, and an inner fuel rod support part extending transversely between the two spaced inner support parts, the inner fuel rod support part being bent at at least two steps along vertical bending lines and defining an equiangular support surface which is equiangular with a fuel rod supported by the inner grid spring, wherein the vertical support part and the two spaced inner support parts are different in structure,

wherein each of the intermediate unit strips (40') has a coolant flow guide vane (57) and a guide tap (58) on an upper edge thereof such that a plurality of coolant flow guide vanes (57) and a plurality of guide taps (58) are alternately arranged along an upper edge of each of the intermediate unit strips (40'), and each of the unit corner strips (40") having either a coolant flow guide vane (57) or a guide tap (58) on an upper edge thereof to complete an alternate arrangement of the coolant flow guide vanes (57) and the guide taps (58), in cooperation with the intermediate unit strips (40'), wherein each of the plurality of intermediate unit strips (40') has two guide taps (58) projecting downward at both corners on a lower edge of each of the intermediate unit strips (40'), and each of the plurality of unit corner strips (40") has a guide tap (58) projecting downward on a lower edge of each of the unit corner strips (40") for reducing interference between the fuel rods (125) and the spacer grid (10) when the fuel rods (125) are inserted and removed.

16. (currently amended) The spacer grid according to claim 15, wherein the vertical support part has a higher spring strength than the two spaced inner support parts whereby soundness of the spacer grid due to a maximum load caused by cross flows of coolant applied to the vertical support part is

provided.

17. (Previously presented) The spacer grid according to claim 15, wherein the vertical support part and the two spaced inner support parts have a different geometry.

18 (Previously presented) The spacer grid according to claim 15, wherein the vertical support part and the two spaced inner support parts have a different shape.

19. (Cancelled)

20. (Currently amended) The spacer grid according to claim 15, wherein the two spaced inner support parts are spaced from each other and from the side edges.

21. (Currently amended) A spacer grid (10) for placing and supporting a plurality of longitudinal fuel rods (125) in a nuclear reactor fuel assembly, comprising:

a plurality of inner strips (30) intersecting each other to form a plurality of guide tube cells (15) to receive guide tubes (13) therein and a plurality of fuel rod cells (26) to receive the fuel rods (125) therein, with a plurality of mixing blades (27) projecting upward from the inner strips (30) at intersections of the inner strips (30); and

a plurality of perimeter strips (40) each of which comprises a plurality of unit strips including intermediate unit strips (40') and corner unit strips (40''), the perimeter strips (40) encircling the intersecting inner strips (30), and the corner unit strips (40'') forming outermost corner cells of the spacer grid (10), with a grid spring (50) provided on each of the unit strips (40',40''), the grid spring (50) comprising:

a vertical opening (53) formed at a central area of each of the unit strips;

a vertical support part (51) extending vertically in the vertical opening (53) from central portions of top and bottom edges of the vertical opening (53); and

a fuel rod support part (52) provided at a central portion of the vertical support part (51), the fuel rod support part (52) being bent to have equiangular surface contact with a fuel rod supported by the grid spring for reducing fretting corrosion on the fuel rod,

further comprising inner grid springs on the inner strips, wherein the inner grid springs comprise an opening formed in the inner strips and defined by top, bottom and side edges, two spaced inner support parts extending vertically in the opening between the top and bottom edges of the opening, and an inner fuel rod support part extending transversely between the two spaced inner support parts, the inner fuel rod support part being bent at at least two steps along vertical bending lines and defining an equiangular support surface which is equiangular with a fuel rod supported by the inner grid spring, wherein the vertical support part and the two spaced inner support parts are different in shape, and the vertical support part has a higher spring strength than the two spaced inner support parts whereby soundness of the spacer grid due to a maximum load caused by cross flows of coolant applied to the vertical support part is provided, and wherein the spring strength is the ratio of force to displacement in an elastic material,

wherein each of the intermediate unit strips (40') has a coolant flow guide vane (57) and a guide tap (58) on an upper edge thereof such that a plurality of coolant flow guide vanes (57) and a plurality of guide taps (58) are alternately arranged along an upper edge of the perimeter strips, and each of the

unit corner strips (40'') having either a coolant flow guide vane (57) or a guide tap (58) on an upper edge thereof to complete an alternate arrangement of the coolant flow guide vanes (57) and the guide taps (58), in cooperation with the intermediate unit strips (40'),

wherein each of the plurality of intermediate unit strips (40') has two guide taps (58) projecting downward at both corners on a lower edge of each of the intermediate unit strips (40'), and each of the plurality of unit corner strips (40'') has a guide tap (58) projecting downward on a lower edge of each of the unit corner strips (40''), and

wherein each of the guide taps (58) is bent toward the center of the spacer grid (10), and is rounded at a bent tip thereof to form an arc-shaped edge, ~~thereby reducing interference between the fuel rods and the spacer grid during an insertion or removal of the fuel rods~~ wherein the guide vanes (57) are shaped differently from the guide taps (58), the mixing blades (27) are shaped differently from the guide vanes (57) and the guide taps (58), the guide taps (58) defined along the perimeter strips have an arc-shaped edge with no point for reducing interference between the fuel rods (125) and the spacer grid (10) when the fuel rods (125) are inserted and removed, and wherein the guide vanes (57) extend to a point.

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Currently amended) A spacer grid (10) for placing and supporting a plurality of longitudinal fuel rods (125) in a

nuclear reactor fuel assembly, comprising:

a plurality of inner strips (30) intersecting each other to form a plurality of guide tube cells (15) to receive guide tubes (13) therein and a plurality of fuel rod cells (26) to receive the fuel rods (125) therein, with a plurality of mixing blades (27) projecting upward from the inner strips (30) at intersections of the inner strips (30); and

a plurality of perimeter strips (40) each of which comprises a plurality of unit strips including intermediate unit strips (40') and corner unit strips (40''), the perimeter strips (40) encircling the intersecting inner strips (30), and the corner unit strips (40'') forming outermost corner cells of the spacer grid (10), with a grid spring (50) provided on each of the unit strips (40',40''), the grid spring (50) comprising:

a vertical opening (53) formed at a central area of each of the unit strips;

a vertical support part (51) extending vertically in the vertical opening (53) from central portions of top and bottom edges of the vertical opening (53); and

a fuel rod support part (52) provided at a central portion of the vertical support part (51), the fuel rod support part (52) being bent to have equiangular surface contact with a fuel rod supported by the grid spring <u>for reducing fretting corrosion of the fuel rod</u>,

further comprising inner grid springs on the inner strips, wherein the inner grid springs comprise an opening formed in the inner strips and defined by top, bottom and side edges, two spaced inner support parts extending vertically in the opening between the top and bottom edges of the opening, and an inner fuel rod support part extending transversely between the two spaced inner support parts, the inner fuel rod support part comprising lateral support elements extending inwardly from the

two spaced inner support parts, and an equiangular support surface extending between the lateral support elements, wherein the equiangular support surface is equiangular with a fuel rod supported by the inner grid spring, and wherein each of the lateral support elements is bent at at least two steps along vertical bending lines,

wherein the vertical support part and the two spaced inner support parts are different in shape, and the vertical support part has a higher spring strength than the two spaced inner support parts,

wherein each of the intermediate unit strips (40') has a coolant flow guide vane (57) and a guide tap (58) on an upper edge thereof such that a plurality of coolant flow guide vanes (57) and a plurality of guide taps (58) are alternately arranged along an upper edge of the perimeter strips, and each of the unit corner strips (40'') having either a coolant flow guide vane (57) or a guide tap (58) on an upper edge thereof to complete an alternate arrangement of the coolant flow guide vanes (57) and the guide taps (58), in cooperation with the intermediate unit strips (40'),

wherein each of the plurality of intermediate unit strips (40') has two guide taps (58) projecting downward at both corners on a lower edge of each of the intermediate unit strips (40'), and each of the plurality of unit corner strips (40'') has a guide tap (58) projecting downward on a lower edge of each of the unit corner strips (40''), and

wherein each of the guide taps (58) is bent toward a center of the spacer grid (10), wherein the center is defined as the point of intersection of a first line drawn between a first two opposed corners of the spacer grid, and a second line drawn between a second two opposed corners of the spacer grid, and wherein each of the guide taps is rounded at a bent tip thereof

to form an arc-shaped edge, ~~thereby reducing interference between the fuel rods and the spacer grid during an insertion or removal of the fuel rods~~

wherein the guide vanes (57) are shaped differently from the guide taps (58), the mixing blades (27) are shaped differently from the guide vanes (57) and the guide taps (58), wherein the guide taps (58) defined along the perimeter strips have an arc-shaped edge with no point for reducing interference between the fuel rods (125) and the spacer grid (10) when the fuel rods (125) are inserted and removed, and wherein the guide vanes (57) extend to a rounded point having a shorter radius than the arc-shaped edge .

26. (Cancelled)